IN THE SPECIFICATION:

Please AMEND the paragraph beginning at page 4, line 8, as follows:

FIG. 4 shows a plot of the points $(I(x_i), T(I(x_i)))$, where $I(x_i)$ is in the intensity of a pixel x_i in the first spot of FIG. 3 and $I(T(x_i))$ is the intensity of a pixel $T(x_i)$ in the second spot that is in register with the first spot under a transformation T;

Please ADD the following three paragraphs beginning at page 4, line 11:

Fig. 5 shows a flow chart of operations in accordance with an embodiment of the method of the present invention;

FIG. 6 shows a flow chart of operations in accordance with another embodiment of the method of the present invention; and

FIG. 7 shows a flow chart of operations in accordance with yet another embodiment of the method of the present invention.

Please ADD the following three paragraphs beginning at page 7, line 3:

Fig. 5 shows a flow chart of operations in accordance with an embodiment of the method of the present invention. The method compares first and second signal arrays, the arrays being comprised of pixels, each pixel in an array having an intensity, and includes the operations of: associating to each of a plurality of pixels x_i in the first array a pixel $T(x_i)$ in the second array 502, and applying a linear regression analysis to the ordered pairs of numbers $(x_i, T(x_i))$ so as to produce a slope 504.

FIG. 6 shows a flow chart of operations in accordance with another embodiment of the method of the present invention. The method determines differential gene expression of a gene and includes the operations of: obtaining digitized images of first and second signal arrays representing first and second expression levels of the gene, respectively, each pixel in all image having an intensity 602; associating to each of a plurality of pixels x_i in the first image a pixel $T(x_i)$ in the second image 604, and applying a linear regression analysis to the ordered pairs of numbers $(x_i, T(x_i))$ so as to produce a slope 606.

FIG. 7 shows a flow chart of operations in accordance with yet another embodiment of the method of the present invention. The method determines differential protein expression and includes the operations of: obtaining digitized images of first and second signal arrays

representing first and second expression levels of the protein, respectively, each pixel in an image having an intensity 702; associating to each of a plurality of pixels x_i in the first image a pixel $T(x_i)$ in the second image 704, and applying a linear regression analysis to the ordered pairs of numbers $(x_i, T(x_i))$ so as to produce a slope 706.